

Work Order ID 58250

May 3, 2010 8:18:24 AM



Page 1

Item ID: D2571

Accept

Revision ID:

Item Name: Saddle, Fwd Out 205

Start Date: 03/05/2010 Start Qty: 8.00

Required Date: 10/05/2010 Req'd Qty: 8.00

Reference:

Approvals:

Process Plan:

Date: 10-5-03

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start

Stop

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

D2571

Rev E

100

0.00



HAAS CNC VERTICAL MACHINING #1

HAAS 1

Memo

H.A

0.00

HAAS CNC vertical machine #1

Program Batch No. B58250 Double check by: JL ☐ 1-Machine Step No 1
per Folio FA051 and inspect per attached Dimension Sheets ☐ 2-Machine Step
No 2 per Folio FA051 and inspect per attached Dimension Sheets ☐ 3-Machine
Step No 3 per Folio FA051 and inspect

H.A 10/05/08

110

0.00



CONVENTIONAL MILLING MACHINE

Mill Conv

Memo

0.00

Conventional Milling Machine

Machine keyway as per dwg D2571 & D2572

H.A 10/05/10

8

0

120

0.00



QC2- Inspect parts off machine FAI/FAIB

QC

Memo

0.00




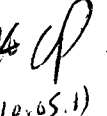



Quality Control

H.A 10/05/08

Pto →

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: D2571 PAR #: _____ Fault Category: Machined parts NCR: Yes No DQA: Yes Date: 10/05/13
 Resolution: Accepted Disposition: USE AS IS QA: N/C Closed: Yes Date: 10/05/17

NCR: 58250		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
(1) 10/05/08	100	1 part #2 measure I, S and w are out of tolerance at some areas RC LOA LOA. when door closed	 10.05.11 per QSI 042	Saddle-skid well under tol. by 0.003" in some areas. Skid holes over tol by 0.003 (location). CP tried part on skid tube/cross tube. Fit OK.	H.A 10/05/08	SL 10/05/11	 10.05.11 per QSI 042	 10/5/14
(2) 10/05/08	100	1 part #3 measure I, K and w are out of tolerance at some areas RC Lack of attention when door is stepped open	 10.05.11 per QSI 042	WALL THICKNESS UNDER TOL IN LIMITED AREA ONLY. Acceptable  10.05.11	H.A 10/05/08	SL 10/05/11	 10.05.11 per QSI 042	 10/5/14

NOTE: Date & initial all entries

Work Order ID 58250

May 3, 2010 8:18:24 AM



Page 2

Item ID: D2571

Accept



Setup Start



Revision ID:

Stop



Item Name: Saddle, Fwd Out 205

Start Date: 03/05/2010 Start Qty: 8.00



Cust Item ID:

Required Date: 10/05/2010 Req'd Qty: 8.00

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

130

QC8- Inspect parts - second check

0.00

SL 10/05/11



QC

Memo

0.00

Quality Control

140

Chemical Conversion Coat per QSI005 4.1

0.00

HL 10/05/11



HandFinish

Memo

0.00

Hand Finishing

150

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00

AK114207

HL 10/05/11



Powdercoat

Memo

0.00

Powder Coating

START TIME: 9:00AM OVEN TEMPERATURE:

FINISH TIME: 9:30AM

320°F

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 58250

May 3, 2010 8:18:24 AM



Page 3

Item ID: D2571

Accept

Revision ID:

Item Name: Saddle, Fwd Out 205

Start Date: 03/05/2010 Start Qty: 8.00

Required Date: 10/05/2010 Req'd Qty: 8.00

Reference:



Setup Start



Stop



Cust Item ID:

Customer:

Run Start



Stop



Approvals:

Process Plan:

Date:

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

160

QC3- Inspect Part Finish

0.00



QC

Memo

0.00

Quality Control

8 BK 10-5-12

170

Identify as per dwg & Stock Location: 133

0.00



Packaging

Memo

0.00

Packaging

10-5-12 82 SP

180

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

10/05/13 13
10-5-12

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

May 3, 2010 8:18:28 AM

Page 1

Work Order ID: 58250



Parent Item: D2571

Parent Item Name: Saddle, Fwd Out 205

Start Date: 03/05/2010

Required Date: 10/05/2010

Comments: IPP: I02.10.02 Re-format; Change to Dwg Rev. D & incorporated
D2572 KJ

Start Qty: 8.00

Required Qty: 8.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Qty Issued	Date Issued	Status
D6101-007		Manufactured	No			100	Each	26.0000	1			
Saddle Billet												

Location

MAT42

46412

Loc Qty

26

26

Loc Code

8.000

B.A 10/05/08

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order:	58250
Description: Saddle, Fwd Outboard		Part Number:	D2571
Inspection Dwg: D2571 Rev. E		Page 1 of 1	

Inspect dimensions highlighted on inspection sheet drawing D2571 Rev. E and record below:

Dim	Min	Max	Go/No Go Gauge	Recorded Actual Dimensions				By	Date
				1	2	3	4		
A	0.438	0.443		0.441	0.441	0.441	0.441		
B	1.745	1.755		1.750	1.750	1.750	1.750		
C	3.495	3.505		3.500	3.500	3.500	3.500		
D	1.745	1.755		1.750	1.750	1.750	1.750		
E	7.990	8.010		8.002	8.002	8.002	8.002		
F	0.490	0.510		0.502	0.505	0.503	0.501		
G	0.257	0.262		0.259	0.259	0.259	0.259		
H	0.375	0.380		0.377	0.377	0.377	0.377		
I	0.490	0.510		0.502	0.5125	0.5125	0.500		
J	1.174	1.184		1.179	1.179	1.179	1.179		
K	0.558	0.578		0.569	0.578	0.579	0.568		
L	1.174	1.184		1.179	1.179	1.179	1.179		
M	1.490	1.500		1.495	1.495	1.495	1.495		
N	2.495	2.505		2.500	2.500	2.500	2.500		
O	3.869	3.879		3.874	3.874	3.874	3.874		
P	0.115	0.135		0.128	0.128	0.128	0.128		
Q	0.115	0.135		0.135	0.135	0.135	0.135		
R	0.240	0.260		0.252	0.252	0.252	0.252		
S	0.115	0.135		0.135	0.138	0.131	0.130		
T	0.178	0.198		0.188	0.188	0.188	0.188		
U	2.940	2.980		2.960	2.960	2.960	2.960		
V	0.230	0.250		0.234	0.234	0.234	0.234		
W	0.115	0.135		0.122	0.112	0.113	0.123		
X	0.308	0.313		0.310	0.311	0.310	0.310		
Y	0.760	0.765		0.764	0.764	0.764	0.764		
Z	0.352	0.372		0.360	0.357	0.360	0.361		
AA	0.470	0.530		0.506	0.500	0.500	0.500		
AB	0.615	0.635		0.630	0.630	0.630	0.630		
AC	0.053	0.073		0.063	0.063	0.063	0.063		
AD	0.240	0.260		0.245	0.243	0.245	0.248		
AE	1.375	1.395		1.388	1.389	1.387	1.387		
AF	0.115	0.135		0.135	0.135	0.135	0.135		
AG	0.240	0.280		0.250	0.250	0.250	0.250		
AH	0.240	0.260		0.250	0.250	0.250	0.250		
AI	2.000	2.020		2.003	2.003	2.002	2.003		
AJ	0.023	0.043		0.033	0.033	0.033	0.033		
Accept/Reject									

Measured by:	H.A
Date:	10/05/08

Audited by:	JL
Date:	10/05/11

Rev	Date	Change	Revised by	Approved
A		New Issue	RF	
B	02.09.24	Re-format; Added Rev. D	KJ	
C	02.10.11	Re-format; Added DT8682, DT8683, DT8684	KJ	
D	05.05.05	Added dimension AI	KJ/RF	
E	05.12.05	Added dimension AJ	KJ/JLM	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD	Work Order: 58250
Description: Saddle, Fwd Outboard	Part Number: D2571
Inspection Dwg: D2571 Rev. E	Page 2 of 2

Inspect dimensions highlighted on inspection sheet drawing D2571 Rev. E and record below:

				Recorded Actual Dimensions				By	Date
Dim	Min	Max	Go/No Go Gauge	#5	#6	#7	#8		
A	0.438	0.443		0.441	0.441	0.441	0.441		
B	1.745	1.755		1.750	1.750	1.750	1.750		
C	3.495	3.505		3.500	3.500	3.500	3.500		
D	1.745	1.755		1.750	1.750	1.750	1.750		
E	7.990	8.010		8.002	8.002	8.002	8.002		
F	0.490	0.510		0.501	0.501	0.501	0.501		
G	0.257	0.262		0.259	0.259	0.259	0.259		
H	0.375	0.380		0.377	0.377	0.377	0.377		
I	0.490	0.510		0.500	0.500	0.500	0.500		
J	1.174	1.184		1.179	1.179	1.179	1.179		
K	0.558	0.578		0.567	0.567	0.567	0.567		
L	1.174	1.184		1.179	1.179	1.179	1.179		
M	1.490	1.500		1.495	1.495	1.495	1.495		
N	2.495	2.505		2.500	2.500	2.500	2.500		
O	3.869	3.879		3.874	3.874	3.874	3.874		
P	0.115	0.135		0.127	0.127	0.127	0.127		
Q	0.115	0.135		0.135	0.135	0.135	0.135		
R	0.240	0.260		0.252	0.252	0.252	0.252		
S	0.115	0.135		0.130	0.130	0.130	0.130		
T	0.178	0.198		0.188	0.188	0.188	0.188		
U	2.940	2.980		2.960	2.960	2.960	2.960		
V	0.230	0.250		0.234	0.235	0.234	0.234		
W	0.115	0.135		0.122	0.123	0.122	0.122		
X	0.308	0.313		0.311	0.311	0.311	0.311		
Y	0.760	0.765		0.764	0.764	0.764	0.764		
Z	0.352	0.372		0.360	0.360	0.361	0.360		
AA	0.470	0.530		0.500	0.500	0.500	0.500		
AB	0.615	0.635		0.630	0.630	0.630	0.630		
AC	0.053	0.073		0.063	0.063	0.063	0.063		
AD	0.240	0.260		0.258	0.258	0.258	0.258		
AE	1.375	1.395		1.388	1.390	1.391	1.390		
AF	0.115	0.135		0.135	0.135	0.135	0.135		
AG	0.240	0.280		0.250	0.250	0.250	0.250		
AH	0.240	0.260		0.250	0.250	0.250	0.250		
AI	2.000	2.020		2.005	2.003	2.003	2.002		
AJ	0.023	0.043		0.033	0.033	0.033	0.033		
Accept/Reject									

Measured by: <u>A. A</u>
Date: <u>10/05/09</u>

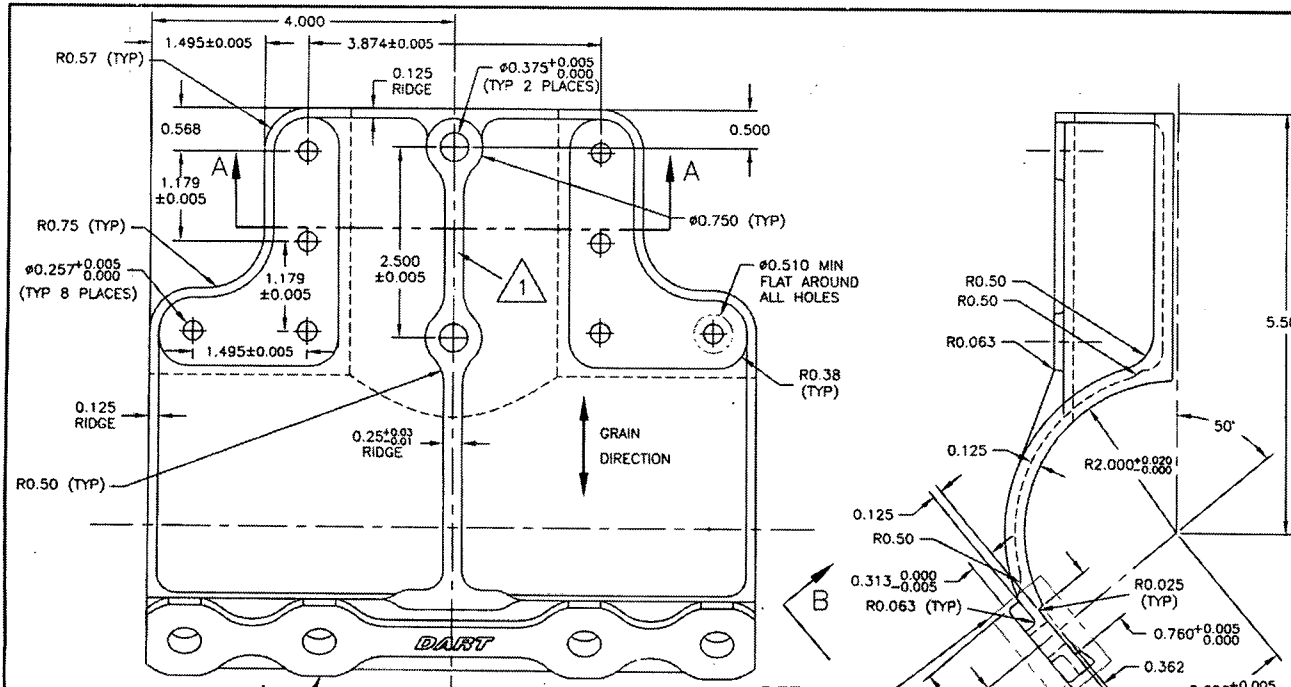
Audited by: <u>JK</u>
Date: <u>10/05/11</u>

Rev	Date	Change	Revised by	Approved
A		New Issue	RF	
B	02.09.24	Re-format; Added Rev. D	KJ	
C	02.10.11	Re-format; Added DT8682, DT8683, DT8684	KJ	
D	05.05.05	Added dimension AI	KJ/RF	
E	05.12.05	Added dimension AJ	KJ/JLM	

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT

WITHOUT NOTICE
WORK ORDER
NO. 58250

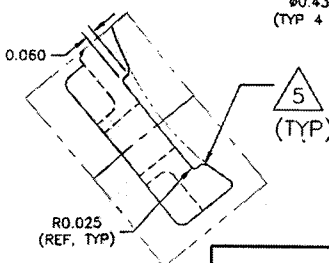
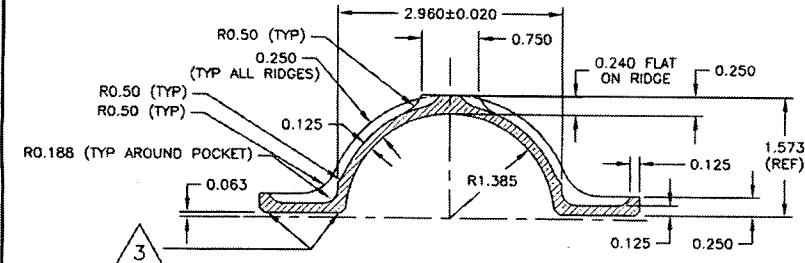
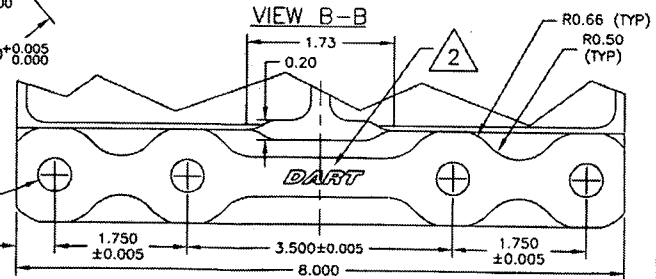
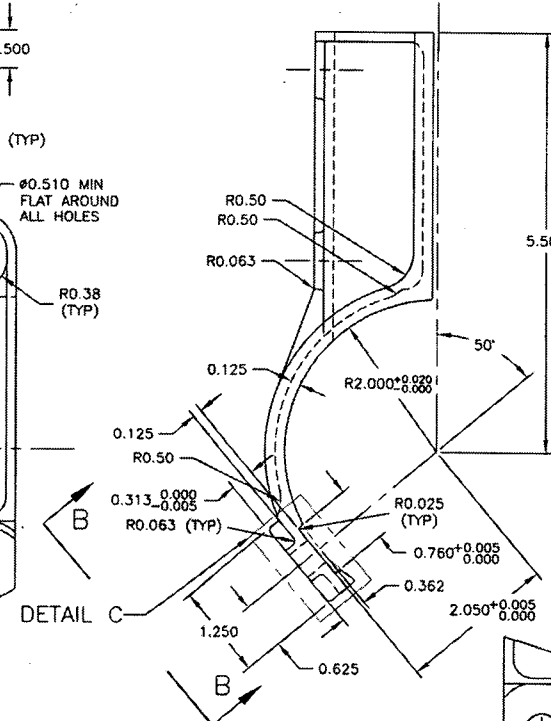
RELEASED
05.12.06



NOTES

MATERIAL: 7075-T7351 (QQ-A-250/12) (REF DART SPEC. D6102-001)
FINISH: ACID ETCH, ALODINE PER DART QSI 005 4.1
POWDER COAT GLOSS WHITE (REF 4.3.5.1) PER DART QSI 005 4.3
BREAK ALL SHARP EDGES 0.010 TO 0.020
TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

- 1 ENGRAVE PART AND BATCH NUMBER IN THIS AREA TO MAX DEPTH OF 0.010
- 2 ENGRAVE DART LOGO TO MAX DEPTH OF 0.015 WITH MIN RAD 0.125
- 3 CHAMFER 0.063" x 45° AROUND THIS SURFACE (TYPICAL 2 PLACES)
- 4 CHAMFER 0.063" x 45° ALL AROUND
- 5 CHAMFER 0.033" x 45° (SEE DETAIL C)



E	05.07.13	ADD CHAMFER ON RIDGE, NOTE 5
D	02.09.06	ADD RIDGES; TIGHTEN TOLERANCES
C	99.10.22	INCP. DEO 9123/9079/9102 ADD DIMENSIONS PER TSR A1177
B	96.12.02	ADD GRAIN DIR., 0.438 WAS 0.425
A	96.09.16	NEW ISSUE
DESIGN	DS	DRAWN BY PH
CHECKED	#	APPROVED #
DATE	05.07.13	TITLE
		OUTER FWD SADDLE
		SCALE 2:3

COPYRIGHT © 2005 BY DART AEROSPACE LTD.
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

DART DART AEROSPACE LTD.
HAMPSHIRE, ONTARIO, CANADA
DRAWING NO. 02571
REV. E
SHEET 1 OF 1

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries